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### Abstract

The invention relates to a process for recovering 3-aminomethyl-3,5,5-trimethylcyclohexylamine (isophoronediamine, IPDA) having a cis/trans isomer ratio of at least 73/27 by fractional distillation, which comprises the following steps:

- a) providing IPDA in a cis/trans isomer ratio of  $< 73/27$ ;
- b) feeding IPDA into the middle region of a distillation column having internals and distilling the IPDA in this distillation column at a temperature of from 5 to 300°C and a pressure of from 10 to 2000 mbar;
- c) optionally further purifying the IPDA obtained by step b) by distilling in at least one further column;

where steps b) and c) separate the IPDA used in step a) into at least five fractions ia) to iv):

- ia) the organic proportion of a fraction of impurities having lower boiling points than trans-IPDA,
- ib) the aqueous proportion of a fraction of impurities having lower boiling points than trans-IPDA,
- ii) a fraction of impurities having higher boiling points than cis-IPDA,
- iii) an IPDA fraction having a cis/trans isomer ratio of  $\geq 73/27$  and
- iv) an IPDA fraction having a cis/trans isomer ratio of  $\leq 66/34$ .